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MTA - in progress

For the Metropolitan Transportation Authority (MTA), climate change is not only an urgent reality, it is a reality to which all six MTA agencies are already devoting extensive financial, planning and engineering resources. The damages to New York's transportation assets by Superstorm Sandy in 2012 gave the MTA no feasible option but to rebuild the system in anticipation of rising sea levels and increasingly volatile weather events.

MTA Director of Sustainability, Projjal Dutta will describe the challenges presented by climate change and MTA's system-wide plans for addressing these challenges. Director Dutta will discuss current and/or completed projects - e.g. the Canarsie Tunnel, Montague Tube, South Ferry Station reconstructions - and identify specific ways in which the MTA is designing and rebuilding with resiliency and sustainability in mind.

Location - NYC

NYC Daylighting - completed

NYC Daylighting installs solatube technology in Sandy-impacted small businesses throughout the Rockaway Peninsula. Solatube daylighting systems capture sunlight through a rooftop dome and use reflective tubing to channel the light through a diffuser, spreading sunlight evenly throughout a room and reducing demand on the grid. In the event of a power outage, Solatube systems continue to provide interior light, allowing back up generator to be conserved for more critical uses.

NYC Daylighting technology has already been installed in ~15 the businesses. The documentary could capture complete installation and use of technology or installation process in the remaining businesses.

Location: Rockaway Peninsula

Hunts Point Resiliency - planning

Hunts Point Resiliency is a project aimed at strengthening energy and flood resiliency for the residents, businesses, and community of Hunts Point in the Bronx. The project is specifically focused on the Hunts Point peninsula – a single square mile of the South Bronx in New York City, which serves as the hub of the food supply for 22 million people in the Northeast

U.S., housing its produce, fish, and meat markets. After a community engagement process, the City has identified and launched two efforts to improve the resiliency of Hunts Point: creating a micro-grid to keep the district online in the event of the power outage, and establishing cooling centers in community facilities to serve community members in the event of extreme heat. Hunts Point Resiliency is funded by The U.S. Department of Housing and Urban Development (HUD) and was developed from HUD's Rebuild by Design Competition which aims to spur new ideas and collaborations for improving coastal area resiliency in the Hurricane Sandy-affected region.

This project is still in the early planning stages. The documentary could capture food markets in operation (fish, meat, or produce) and community engagement efforts.

Location: Hunts Point

Coney Island Houses - planning

Coney Island Houses is so close to the ocean that it shares one side with the boardwalk. When Superstorm Sandy hit, the cellar spaces of the 5 fourteen-story buildings on site were completely inundated with water, including the site's central boilers, which failed. The development has been using temporary boilers since then. The resilience scope is comprehensive and includes: full roof replacement, replacement of flooded mechanical and electrical equipment with installation in new raised ancillary structures, and full back-up stand-by generator systems to ensure buildings are powered without interruption. Additionally, the new boiler structure's height above the design flood elevation accounting for sea level rise incorporates a space for a community facility that will become a permanent amenity for the residents of the development.

The documentary could include site visit, equipment demo, and construction plans.

Location: Coney Island, Brooklyn

Living Breakwaters - planning

The south shore of Staten Island was one of the hardest hit areas during Hurricane Sandy, experiencing severe erosion from the storm, and, given the predicted impacts of sea level rise, it will continue to lose acreage in the future if no action is taken to protect the area. Living Breakwaters was conceived to connect physical, social, and ecological resilience. The proposal is a "necklace" of offshore breakwaters - rocky sloped walls within the water column that can drastically dissipate destructive wave energy - that will reduce risk, revive ecologies, and connect residents and educators to Staten Island's southeast shoreline.

Documentary could include project description - challenges presented and addressed, visualizations explaining how the breakwaters will work, visit to Staten Island shoreline site of implementation.

Location: Staten Island

Resilient Mesh Wireless Initiatives - in progress

Through the RISE : NYC program, 6 Resilient Mesh Internet networks are being established and expanded throughout the city. These community Wi-Fi networks will operate in 6 business corridors that were impacted by Hurricane Sandy: Red Hook, Hunts Point, Gowanus, East Harlem, Sheepshead Bay and Far Rockaway. The networks leverage mesh firmware, giving them the ability to re-route Internet traffic around outages and maintain connectivity in the event of a telecom failure. The initiatives also include a workforce development, training and employing local residents, known as “digital stewards” to install and maintain the network infrastructure in their neighborhood.

The documentary could capture existing network infrastructure (in store-fronts and on rooftops) that is being expanded upon with additional routers and solar backup. We could film local, "digital steward" training sessions.

Locations: Red Hook, Hunts Point, Gowanus, East Harlem, Sheepshead Bay, and Far Rockaway

Rockaway Boardwalks Reconstruction - completed

The Rockaway Boardwalks Reconstruction Project, initiated in the wake of the approximately 4.7 miles of boardwalk damage and destruction unleashed by Hurricane Sandy, creates a more protected and active peninsula. The new, reinforced concrete boardwalk is elevated above the 100-year flood plain, and is supplemented with over four-and-a-half miles of retaining walls and planted sand dunes.

Location: Rockaway Penninsula

Bright Power – Resilient Power Hub - planning

Bright Power will install Resilient Power Hubs at three Sandy-impacted businesses in Coney Island and Red Hook. The Resilient Power Hub is a building-scale power plant that integrates a micro-combined heat and power system with solar photovoltaics and energy storage to provide a continuous source of power even when the grid and/or natural gas infrastructure is disrupted. The Hub incorporates automatic controls for the individual system components and provides end-users with a data management portal.

Bright Power technology has not been deployed yet. The documentary could capture a business site visit, equipment demo, and construction plans. There is the potential for a groundbreaking on construction in late April.

Locations: Coney Island, Red Hook

goTenna - in progress

goTenna is a miniaturized, high-power radio frequency transceivers that enables peer-to-peer communication via smartphones, allowing communication even when cell or data connection has been severed.

Visuals: the documentary could capture device distribution to businesses, community distribution/training events, or visit to goTenna headquarters in Downtown Brooklyn

Locations: Staten Island, Coney Island, Red Hook, Downtown Brooklyn

Geosyntec - in progress

Geosyntec performs resiliency audits to assess vulnerability and installing physical flood protection systems in Sandy-impacted businesses. Geosyntec provides business with a web-based platform that integrates weather forecasting with site-specific characteristics and data from field sensors that measure water level, temperature and moisture to create a real-time flood risk assessments that push notifications to end users.

Visuals: The documentary could capture site visit/resiliency audit of a small-businesses and footage of the web platform and data visualization.

Location: Staten Island